AF/IFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Barrington Herman	Attorney Docket No.: WEYE121980/24877
Application No.:	10/727,442	Art Unit: 3643
Filed:	December 3, 2003	Examiner: Jeffrey L. Gellner
Title:	USE OF A CYTOKININ TO PROMOTE GROWTH OF SHOOTS FROM A LOG	

APPELLANT'S REPLY BRIEF

Seattle, Washington 98101

March 31, 2006

TO THE COMMISSIONER FOR PATENTS:

This brief is being filed in accordance with 37 C.F.R. §41.41(a) and in response to an Examiner's Answer mailed on January 31, 2006.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

ARGUMENT

The Rejection of Claims 1, 7 and 8 under 35 U.S.C. § 103(a) as being Unpatentable Over Cuenca et al., *Plant Cell, Tissue and Organ Culture* 60:213-220 (2000), in view of Saul et al., *Forest Research* Note 33 (1982)

In connection with the rejection of Claims 1, 7 and 8 under 35 U.S.C. § 103(a) as being unpatentable over Cuenca et al., in view of Saul et al., the Examiner's Answer, mailed January 31, 2006, set forth the argument that there is explicit motivation in Cuenca et al. to modify the method of Cuenca et al. to obtain "bud regeneration from adult material in the field" because Cuenca et al. explicitly discloses this desire at page 214, col 1. The Examiner further states that Saul et al. provides a reasonable expectation of success "because it discloses that both lignified cutting (considered logs) and green cuttings (considered juvenile material) both produced roots when cloned." (emphasis added).

Applicant notes that bud regeneration using *in vitro* culturing methods as disclosed in Cuenca et al. is a different process than the claimed invention, which is directed to generating shoots from a log. As previously submitted, there is no suggestion or teaching in the Cuenca et al., or Saul et al. that the in vitro method of Cuenca et al. could be modified to produce shoots from a log, as claimed (see Appeal Brief, page 11, filed November 10, 2005). As previously submitted, the eventual goal stated in Cuenca et al. of obtaining bud regeneration from adult material does not provide a motivation or expectation of success to modify the disclosed *in vitro* method for use with logs. Even assuming, without conceding, that the passage cited by the Examiner in Cuenca et al. (page 214, col 1) would provide one with a motivation to modify the *in vitro* method disclosed in the Cuenca et al. reference to "obtain bud regeneration from adult material in the field," the cited passage refers to the re-generation of buds isolated from active buds on an actively growing adult tree. In contrast, the present invention is directed to

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

generating shoots from a log, which is described in the specification as cut logs, typically between twelve inches and twenty four inch long (specification at page 3, lines 9-12). Therefore, it is submitted that the Cuenca et al. reference does not teach or suggest the method of the claimed invention.

In addition, in response to the Examiner's position that Saul et al. provides a reasonable expectation of success for one to try to generate shoots from logs "because Saul et al. discloses that both cuttings of logs and juvenile material can generate roots when cultured," applicant wishes to point out that Saul et al. does not teach or suggest a method of generating shoots from a log, as claimed in the present invention. It appears that the Examiner has equated roots with shoots, however, shoots are physiologically different than roots. Saul et al. discloses obtaining cuttings from lignified or green stems, dipping them into rooting powder and plating them vertically into a rooting media to obtain roots. In contrast, as described in the specification, "[s]hoots may have the appearance of small branches and may form leaves. A shoot can be induced to form roots by excising the shoot from the log, applying a rooting hormone to the cut surface of the shoot, and thereafter cultivating the shoot in a growth medium under environmental conditions that promoter root formation." (See Specification page 2, lines 28-31). Therefore the Saul et al. reference would not provide one with a reasonable expectation of success of promoting the growth of shoots from a log comprising the step of applying at least one cytokinin to the log, as claimed.

Accordingly, it is submitted that the rejection of Claims 1, 7 and 8 under 35 U.S.C. § 103(a) as being unpatentable over Cuenca et al. in view of Saul et al. is improper. A decision reversing the Examiner's rejection is respectfully requested.

The Rejection of Claim 14 As Being Unpatentable Under 35 U.S.C. § 103(a) Over Cuenca et al., *Plant Cell, Tissue and Organ Culture* 60:213-220 (2000), in view of Saul et al.,

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Forest Research Note 33 (1982), and Further in View of Wang, HortScience 25(12): 1602-1604 (1990)

In connection with the rejection of Claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Cuenca et al., in view of Saul et al., and further in view of Wang, the Examiner's Answer, mailed January 31, 2006, set forth the argument that Wang discloses that nitrogen fertilizer affects plant growth when the plants are cuttings (considered by the Examiner to be equivalent to shoots) in a cloning process using cytokinin. The Examiner then concludes that one of ordinary skill in the art would be motivated to use nitrogen fertilizer in the method of Cuenca et al. and Saul et al. and to optimize the amount of fertilizer used.

It is submitted that Wang teaches away from the claimed invention by teaching that the use of Nitrogen-containing fertilizer (24N-3.5P-13.3K) improves the growth of cuttings. In contrast, the present invention is directed to a method of promoting the growth of shoots from a log comprising applying a fertilizer that includes no more than about 0.01% (w/v) nitrogen to the log. Moreover, Wang teaches away from the method of Claim 1, from which Claim 14 depends, by stating "[r]esults from these experiments and another study (Wang, 1987) suggest cytokinin or GA application to stock plants or cuttings does not benefit axillary shoot growth on cuttings of golden pothos." Wang, 1990, page 1604, last paragraph (emphasis added). Accordingly, for at least the reasons set forth in connection with the rejection of Claims 1, 7 and 8 as being unpatentable over Cuenca et al. in view of Saul et al., and further in view of the fact that Wang teaches away from the claimed invention, it is submitted that Claim 14 is patentable in view of the cited references either alone, or in any combination.

///

///

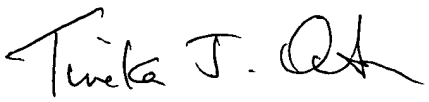
///

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Accordingly, it is submitted that the rejection of Claims 1-14 under 35 U.S.C. § 103(a) as being unpatentable over the cited references is improper. A decision reversing the Examiner's rejection and finding all claims in condition for allowance is respectfully requested.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS[PLLC]



Tineka J. Quinton
Registration No. 53,496
Direct Dial No. 206.695.1655

TJQ:TJQ

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS[PLLC]
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100